

CLAIMS:

1. A resonant converter (1) which has multiple outputs (7a, 7b) and contains a transformer (4) with a primary winding (5) and at least two secondary windings (6a, 6b) of different winding directions.
- 5 2. A resonant converter as claimed in claim 1, characterized in that the transformer (4) has a first group of secondary windings with one or more secondary windings (6a) having a first winding direction and a second group of secondary windings with one or more secondary windings (6b) having a second winding direction, at least two of the secondary windings (6a, 6b) being electrically separated from one another.
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3. A resonant converter as claimed in claim 1, characterized in that the transformer (4) has a first group of secondary windings with one or more secondary windings (6a) having a first winding direction and a second group of secondary windings with one or more secondary windings (6b) having a second winding direction, at least two of the
15 secondary windings being electrically connected to one another.
4. A resonant converter as claimed in claim 3, characterized in that the secondary windings (6a, 6b) are connected to a ground potential.
- 20 5. A resonant converter as claimed in one of claims 1 to 4, characterized in that the resonant frequency of the resonant converter is determined by the main inductance (L_h) and the leakage inductances (L_{rp} , L_{rsa} , L_{rsb}) of the transformer (4) and by a capacitive element (3).
- 25 6. A resonant converter as claimed in one of claims 1 to 5, characterized in that, in addition to the transformer (4) at least one additional inductive element (L_1 , L_{2a} , L_{2b}) is provided which co-determines the resonant frequency of the resonant converter.

7. A resonant converter as claimed in one of claims 1 to 6, characterized in that the converter has switching elements (24, 25) for chopping an input d-c voltage (U_{DC}) and in that a feedback loop having a regulating circuit (8) is provided for regulating the frequency and the duty cycle of the chopped input d-c voltage (U_s).

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8. A resonant converter as claimed in one of claims 1 to 7, characterized in that, the secondary windings (6a, 6b) of the transformer (4) are connected to the converter outputs by way of one diode (D_a , D_b) and one output filter (F_a , F_b) each.

10 9. A resonant converter as claimed in one of claims 1 to 8, characterized in that different ratios of output voltage to number of turns are provided in respect of associated secondary windings having different winding directions.

10. A resonant converter as claimed in one of claims 1 to 9, characterized in that,
15 where a group of multiple secondary windings having the same winding direction is provided, it is proposed to derive a measuring signal (V_a , V_b) for regulating the converter output voltages from just one of the associated output voltages.